GWD DESIGN, INC.

Pipeline MAOP Calculation per CFR 195.106 and consistent with ASME B31.4 Sec. 402 & 404

Client:	Whiting Petroleum Corporation	**Rev.:**	B
Project:	Nexen 8" Oil Pipeline	**Rev. Date:**	10/6/2009
Location:	Stanley, ND	**Print Date:**	10/6/2009

P=(2St/D)xExF (See CFR 195.106 for references below)

P =Internal design pressure in p.s.i. (kPa) gage.

S =Yield strength in pounds per square inch (kPa) determined in accordance with paragraph (b) of this section.

t =Nominal wall thickness of the pipe in inches (millimeters).
If this is unknown, it is determined in accordance with paragraph (c) of this section.

D =Nominal outside diameter of the pipe in inches (millimeters).

E =Seam joint factor determined in accordance with paragraph (e) of this section.

F =A design factor of 0.72, except that a design factor of 0.60 is used for pipe, including risers, on a platform located offshore or on a platform in inland navigable waters, and 0.54 is used for pipe that has been subjected to cold expansion to meet the specified minimum yield strength and is subsequently heated, other than by welding or stress relieving as a part of welding, to a temperature higher than 900 °F (482 °C) for any period of time or over 600 °F (316 °C) for more than 1 hour.

Line Pipe Calculation:

S =	42,000 psi	API 5L B, X42/X52 (transition piece is API 5L B, X42)
t =	0.250 inches	
D =	8.625 inches	
E =	1	Only ERW pipe will be used (see CFR 195.106 paragraph (e))
F =	0.72	
P =	**1753 psig**	**From -20 °F to 100 °F**

Above Ground Pipe Calculation:

S =	35,000 psi	A333 Gr 6 (see attached Fig. 17-25 from GPSA 12th Edition Vol. II)
t =	0.500 inches	Sch. 80
D =	8.625 inches	
E =	1	Only ERW/Seamless pipe will be used (see CFR 195.106 paragraph (e))
F =	0.72	
P =	**2922 psig**	**From -20 °F to 100 °F**

(NOTE: 4" STD wall used for valves is rated to 2654 psig)
(NOTE: Temperatures below -20 °F are excluded from the scope of ASME B31.4-2006)

Pipeline "Weak Link":

The weakest point in the pipeline will be the ANSI 600# flanges per ASME B16.5-2003 as shown in the attached Fig. 17-28 from GPSA 12th Edition Vol. II. **MAOP will be 1480 psig from -20 to 100 °F.**

GWD DESIGN, INC.

Hydrotest Calculation per ASME B31.4 Sec. 437.4

Client:	Whiting Petroleum Corporation	**Rev.:**	B
Project:	Nexen 8" Oil Pipeline	**Rev. Date:**	9/21/2009
Location:	Stanley, ND	**Print Date:**	10/6/2009

per ASME B31.4 the hydrotest must be run at 1.25 times the MAOP for 4 hours and 1.1 times for 4 hours

MAOP = 1480 psig (see MAOP Calculation)

Hydrotest Pressure:

Hydrotest Pressure = MAOP x 1.25

Hydrotest Pressure = 1850 psig (Required at Highest Point in Elevation during 1.25 test)

Elevation Change Pressure Head:

Max Elevation Change = Highest Elevation Point - Lowest Elevation Point

Max Elevation Change = 2371 ft- 2157 ft (See Attached Pipeline Profile)

Max Elevation Change = 214 ft

Water Pressure Head = 92.8 psi (Only valid with Water as Test Medium)

Minimum Pressure at Points During Test:

Inlet Elevation =	2192.50 ft	Inlet Pressure =	1925 psig
Outlet Elevation =	2204.85 ft	Outlet Pressure =	1920 psig
High Pt Elevation =	2366.59 ft	High Pt Pressure =	1850 psig
Low Pt Elevation =	2158.16 ft	Low Pt Pressure =	1940 psig
Chart Elevation =	2204.85 ft	**Chart Pressure =**	**1920 psig**

NOTE: Chart was located at the pipeline outlet near Stanley,ND.

GWD DESIGN, INC.

Hydrotest Calculation per ASME B31.4 Sec. 437.4

Client:	Whiting Petroleum Corporation	**Rev.:**	C
Project:	Nexen 8" Oil Pipeline	**Rev. Date:**	10/6/2009
Location:	Stanley, ND	**Print Date:**	10/6/2009

per ASME B31.4 Sec. 437.4.1: When lines are tested at pressures that develop a hoop stress, based on nominal wall thickness, in excess of 90% of the specified minimum yield strength of the pipe, special care shall be used to prevent overstrain of the pipe.

Hoop Stress = PxID/2xt < 90% S

P = Internal Pressure in psig

ID = Internal Diameter in inches

t = Wall Thickness in inches

S = Yield Strength in psi

Line Pipe Hoop Stress Calculation:

To prevent overstrain of pipe Max Hydrotest pressure should be at a hoop stress less than 90% of SMYS

ID =	8.125 in
t =	0.250 in
S =	52,000 psi
Max Hoop Stress =	46,800 psi
P =	**2880 psig** (Max Pressure that can be applied at lowest point)

Above Ground Pipe Hoop Stress Calculation:

To prevent overstrain of pipe Max Hydrotest pressure should be at a hoop stress less than 90% of SMYS

		Transition Piece
ID =	7.625 in	8.125 in
t =	0.500 in	0.250 in (min)
S =	35,000 psi	42,000 psi
Max Hoop Stress =	31,500 psi	37,800 psi
P =	**4131 psig**	**2326 psig**

Maximum Allowable Pressure at Points During Test:

Inlet Elevation =	2192.50 ft	Inlet Pressure =	2865 psig
Outlet Elevation =	2204.85 ft	Outlet Pressure =	2860 psig
High Pt Elevation =	2368.59 ft	High Pt Pressure =	2790 psig
Low Pt Elevation =	2158.16 ft	Low Pt Pressure =	2880 psig
Chart Elevation =	2204.85 ft	**Chart Pressure =**	**2860 psig**

NOTE: Chart was located at the pipeline outlet near Stanley,ND.

GWD DESIGN, INC.

Fill Volume Calculation

Client:	Whiting Petroleum Corporation	**Rev.:**	B
Project:	Nexen 8" Oil Pipeline	**Rev. Date:**	9/21/2009
Location:	Stanley, ND	**Print Date:**	10/6/2009

Volume = $\pi x R^2 x L$

R = ID/2

ID = 8.125 in =	0.67708	ft
R =	0.33854	ft
L =	94,500	ft
Volume =	**34,026**	ft^3
Volume =	**254,529**	gallons
Volume =	**6,060**	bbls

8" Nexen Oil Pipeline Profile

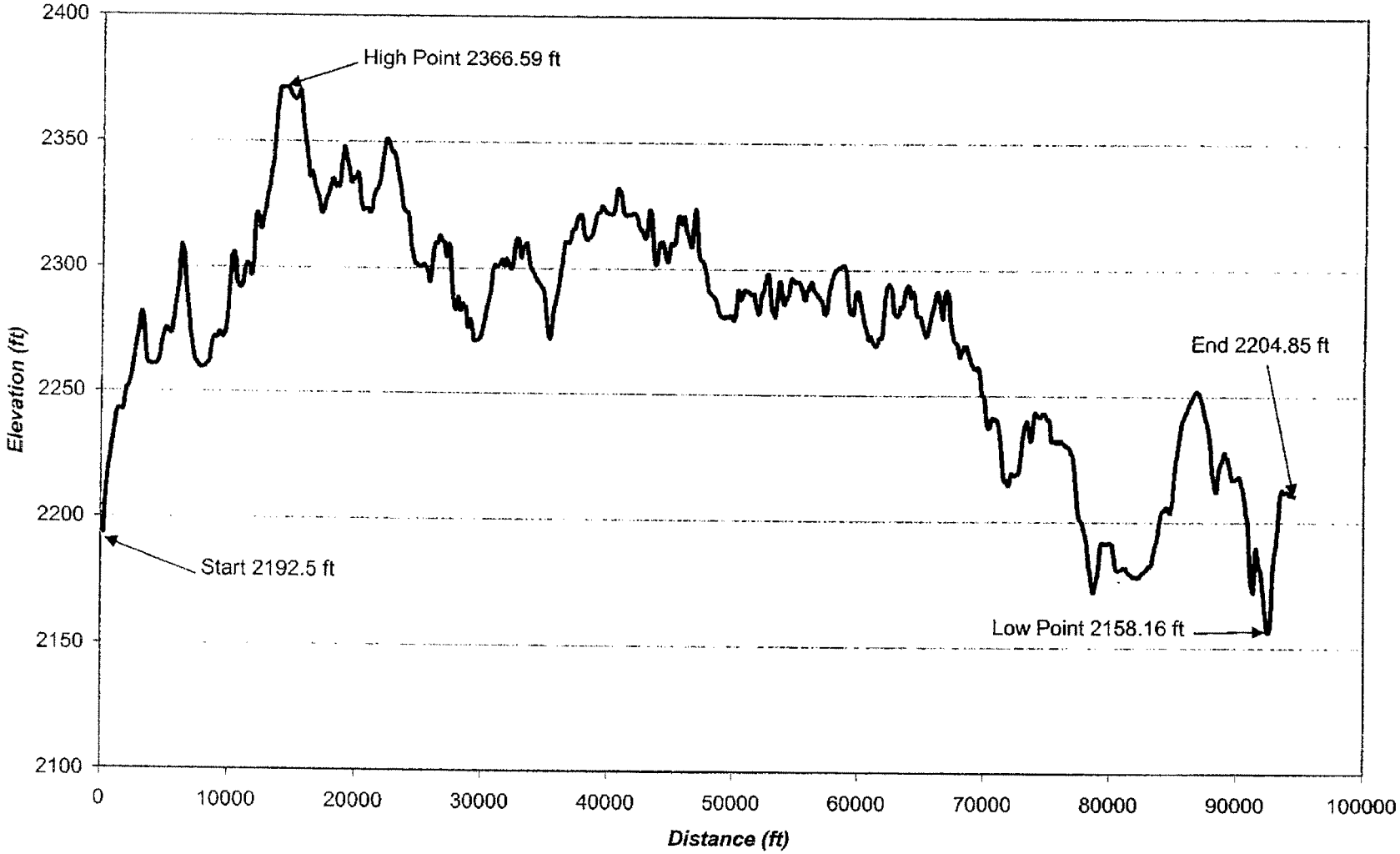


FIG. 17-25

Representative Allowable Stresses in Tension for Materials (Developed from ASME B31.3, 2002, Tables A-1, A-1B)

Material	Specification	Grade	Class	Factor (E)	Tensile Strength min. psi	Yield Strength min. psi	BASIC ALLOWABLE STRESSES IN TENSION, psi (1) Metal Temperature, °F (7): (6) Min. Temp.	Min. Temp. to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100
CARBON STEEL																							
Seamless Pipe																							
	ASTM A53	A	Type S		48000	30000	-20	16000	16000	16000	16000	16000	14800	14500	14400	10700	9300	7900	6500	4500	2500	1600	1000
	ASTM A53	B	Type S		60000	35000	-20	20000	20000	20000	20000	18900	17300	17000	16500	13000	10800	8700	6500	4500	2500	1600	1000
	ASTM A106	A			48000	30000	-20	16000	16000	16000	16000	16000	14800	14500	14400	10700	9300	7900	6500	4500	2500	1600	1000
	ASTM A106	B			60000	35000	-20	20000	20000	20000	20000	18900	17300	17000	16500	13000	10800	8700	6500	4500	2500	1600	1000
	ASTM A106	C			70000	40000	-20	23300	23300	23300	22500	21600	19700	19400	19200	14800	12000						
	ASTM A120						-20	12000	11400														
	ASTM A333	1			55000	30000	-50	18300	18300	17700	17200	16200	14800	14500	14400	12000	10200	8300	6500	4500	2500	1600	1000
	ASTM A334	1			55000	30000	-50	18300	18300	17700	17200	16200	14800	14500	14400	12000	10200	8300	6500	4500	2500	1600	1000
	ASTM A333	6			60000	35000	-50	20000	20000	20000	20000	18900	17300	17000	16500	13000	10800	8700	6500	4500	2500	1600	1000
	ASTM A334	6			60000	35000	-50	20000	20000	20000	20000	18900	17300	17000	16500	13000	10800	8700	6500	4500	2500	1600	1000
	API 5L	A			48000	30000	-20	16000	16000	16000	16000	16000	14800	14500	14400	10700	9300	7900	6500	4500	2500	1600	1000
	API 5L	B			60000	35000	-20	20000	20000	20000	20000	18900	17300	17000	16500	13000	10800	8700	6500	4500	2500	1600	1000
	API 5LX	X42			60000	42000	-20	20000	20000	20000	20000												
	API 5LX	X46			63000	46000	-20	21000	21000	21000	21000												
	API 5LX	X52			66000	52000	-20	22000	22000	22000	22000												
	API 5LX	X52			72000	52000	-20	24000	24000	24000	24000												
Electric Resistance Welded Pipe																							
	ASTM A53	A	Type E	0.85	48000	30000	-20	13600	13600	13600	13600	13600	12600	12300	12250	9100	7900	6700	5500	3800	2150	1350	850
	ASTM A53	B	Type E	0.85	60000	35000	-20	17000	17000	17000	17000	16100	14700	14500	14000	11000	9200	7350	5500	3800	2150	1350	850
	ASTM A120			0.85			-20	10200	9800														
LOW AND INTERMEDIATE ALLOY STEEL & STAINLESS STEEL (4.40) - Seamless Pipe																							
3 1/2 Ni	ASTM A333	3			65000	35000	-150	21700	19600	19600	18700	17800	16800	16300	15500	13900	11400	9000	6500	4500	2500	1600	1000
3 1/2 Ni	ASTM A334	3			65000	35000	-150	21700	19600	19600	18700	17800	16800	16300	15500	13900	11400	9000	6500	4500	2500	1600	1000
Ni-Cr-Cu-Al	ASTM A333	4			60000	35000	-150	20000	19100	18200	17300	16400	15500	15000									
2 1/4 Ni	ASTM A333	7			65000	35000	-100	21700	19600	19600	18700	17600	16800	16300	15500	13900	11400	9000	6500	4500	2500	1600	1000
2 1/4 Ni	ASTM A334	7			65000	35000	-100	21700	19600	19600	18700	17600	16800	16300	15500	13900	11400	9000	6500	4500	2500	1600	1000
9 Ni	ASTM A333	8			100000	75000	-320	31700	31700														
9 Ni	ASTM A334	8			100000	75000	-320	31700	31700														
18Cr-8Ni Pipe	ASTM A376	TP304			75000	30000	-425	20000	*20000*	*20000*	18700	17500	16400	16200	16000	15600	15200	14900	14600	14400	*13800*	*12200*	9700
18Cr-8Ni Pipe	ASTM A376	TP304H			75000	30000	-325	20000	*20000*	*20000*	18700	17500	16400	16200	16000	15600	15200	14900	14600	14400	*13800*	12200	9700

Note: ASME 31.3 Appendix A includes notes which may additionally limit allowable stress values or application of the above materials due to temperature limitations, wall thickness, heat treating, material composition, etc. Refer to ASME 31.3 Appendix A notes for these limitations or special requirements applicable to particular materials.

FIG. 17-27

Gas Transmission and Distribution Piping
Code for Pressure Piping ANSI B31.8-1999
Carbon Steel and High Yield Strength Pipe
(Values apply to A106, API 5L and API 5LX pipe having the same specified minimum yield strength as shown)

Nom Pipe Size	O.D.	Wall Thk.	Allowable Working Pressures up to 250°F, in psig																	
			Construction Type Design Factors																	
			Type A, F = 0.72*					Type B, F = 0.60					Type C, F = 0.50					Type D, F = 0.40				
			GR.B					GR.B					GR.B					GR.B				
			35,000	42,000	46,000	52,000	60,000	35,000	42,000	46,000	52,000	60,000	35,000	42,000	46,000	52,000	60,000	35,000	42,000	46,000	52,000	60,000
2	(STD)	.154	3266					2723					2270					1816				
	2.375	.218	4626					3855					3213					2570				
3	3.500 (STD)	.125	1800					1500					1250					1000				
		.156	2246					1872					1560					1248				
		.188	2707					2256					1880					1504				
		.216	3110					2592					2160					1728				
		.250	3600					3000					2500					2000				
		.281	4046					3372					2810					2248				
		.300	4320					3600					3000					2400				
4	4.500 (STD)	.125	1400	1680	1840			1167	1400	1533			973	1167	1278			778	933	1022		
		.156	1747	2097	2296			1456	1747	1913			1214	1456	1595			971	1165	1276		
		.188	2105	2526	2767			1754	2105	2306			1462	1755	1922			1170	1404	1537		
		.219	2453	2943	3223			2044	2453	2686			1704	2044	2239			1363	1635	1791		
		.237	2654	3185	3488			2212	2654	2907			1844	2212	2423			1475	1770	1938		
		.250	2800	3360	3680			2333	2800	3067			1945	2333	2556			1556	1869	2044		
		.281	3147	3776	4136			2623	3147	3447			2186	2622	2873			1748	2098	2298		
		.312	3494	4193	4593			2912	3494	3827			2427	2912	3190			1941	2330	2552		
		.337	3774	4530	4861			3145	3775	4134			2621	3146	3445			2097	2516	2756		
6	6.625 (STD)	.156	1187	1424	1560	1763		989	1187	1300	1469		824	989	1083	1224		659	791	866	980	
		.188	1429	1716	1880	2124		1192	1430	1567	1770		993	1192	1306	1475		794	954	1044	1180	
		.219	1666	2000	2190	2475		1388	1666	1825	2063		1157	1389	1521	1719		928	1111	1216	1375	
		.250	1902	2282	2500	2826		1586	1902	2083	2355		1321	1585	1736	1963		1057	1268	1389	1570	
		.280	2130	2556	2799	3164		1775	2130	2333	2637		1479	1775	1944	2198		1183	1420	1555	1758	
		.312	2373	2848	3120	3527		1978	2374	2600	2939		1649	1978	2167	2449		1319	1582	1733	1959	
		.375	2853	3424	3750	4237		2377	2853	3125	3531		1981	2378	2604	2943		1585	1902	2083	2354	
		.432	3287	3943	4319	4883		2739	3286	3599	4069		2283	2738	3000	3391		1826	2191	2400	2713	
8	8.625 (STD)	.156	912	1094	1198	1354		760	912	998	1128		633	760	832	940		506	608	666	752	
		.188	1098	1318	1444	1632		915	1098	1203	1360		763	915	1003	1133		610	732	802	907	
		.203	1186	1424	1559	1762		989	1186	1299	1469		824	989	1083	1224		659	791	866	979	
		.219	1280	1536	1681	1901		1067	1280	1401	1584		889	1067	1168	1320		711	853	934	1056	
		.250	1461	1753	1920	2170		1217	1461	1600	1809		1014	1217	1333	1507		812	974	1067	1206	
		.277	1618	1942	2128	2405		1349	1618	1773	2004		1124	1349	1478	1670		899	1079	1192	1336	
		.312	1823	2189	2396	2709		1520	1823	1997	2258		1268	1520	1664	1881		1013	1216	1331	1505	
		.322	1882	2258	2473	2796		1568	1882	2061	2329		1307	1568	1717	1941		1045	1254	1374	1553	
		.344	2011	2412	2642	2988		1676	2011	2202	2490		1398	1676	1835	2075		1117	1340	1468	1660	
		.375	2191	2628	2880	3256		1826	2191	2399	2713		1521	1826	1999	2261		1217	1460	1599	1808	
		.438	2560	3071	3364	3803		2133	2560	2804	3170		1778	2133	2336	2641		1422	1706	1869	2113	
		.500	2922	3506	3840	4341		2435	2922	3200	3617		2029	2435	2667	3014		1623	1948	2133	2412	
10	10.750 (STD)	.188	881	1058	1158	1310		733	881	965	1091		612	735	804	909		490	588	644	728	
		.203	969	1143	1251	1415		794	952	1043	1179		661	794	869	983		529	635	695	786	
		.219	1026	1231	1348	1525		855	1026	1124	1271		713	855	936	1059		570	684	749	847	
		.250	1172	1407	1540	1741		977	1172	1284	1451		814	977	1070	1209		651	781	856	967	
		.279	1309	1570	1719	1944		1091	1309	1433	1620		909	1091	1194	1350		727	872	955	1080	
		.307	1440	1728	1892	2138		1200	1440	1577	1782		1000	1200	1314	1486		800	960	1051	1189	
		.344	1613	1935	2120	2396		1344	1613	1767	1997		1120	1344	1473	1664		896	1075	1178	1331	
		.365	1711	2054	2249	2542		1426	1711	1874	2119		1188	1426	1562	1766		951	1141	1249	1412	
		.438	2054	2464	2700	3051		1712	2054	2250	2543		1426	1712	1875	2119		1141	1369	1500	1695	
		.500	2344	2813	3081	3483		1953	2344	2567	2902		1628	1953	2140	2419		1302	1563	1712	1935	
12	12.750 (STD)	.188	743	892	977	1104		619	743	814	920		516	619	678	767		413	495	543	613	
		.203	803	963	1055	1193		669	803	879	995		558	669	733	829		446	535	586	663	
		.219	866	1039	1138	1287		722	866	948	1073		601	722	790	894		481	577	632	715	
		.250	988	1186	1299	1468		824	988	1082	1224		686	824	902	1020		549	659	722	816	
		.281	1111	1332	1460	1651		926	1111	1217	1376		771	926	1014	1146		617	740	811	917	
		.312	1233	1480	1620	1832		1028	1233	1350	1527		856	1028	1125	1273		685	822	900	1018	
		.330	1305	1566	1715	1939		1088	1305	1430	1616		906	1088	1191	1346		725	870	953	1077	
		.344	1359	1631	1786	2020		1133	1359	1488	1683		944	1133	1240	1403		755	906	992	1122	
		.375	1482	1779	1948	2202		1235	1482	1624	1835		1029	1235	1353	1529		824	988	1082	1224	
		.406	1606	1926	2110	2385		1338	1606	1758	1988		1115	1338	1465	1656		892	1070	1172	1325	
		.438	1732	2077	2275	2572		1443	1732	1896	2144		1203	1443	1580	1786		962	1154	1264	1429	
		.500	1976	2372	2598	2936		1647	1976	2165	2447		1373	1647	1804	2039		1098	1318	1443	1631	

* Type A construction also applicable to "Liquid Petroleum Transportation Piping Code," ANSI B31.4-2002

FIG. 17-28

Pressure-Temperature Ratings for Pipe Flanges and Flanged Fittings from ANSI B16.5-1996

CLASS	150	300	400	600	900	1500	2500
Material Group 1.1			(Carbon Steel)			A105 (1), A216–WCB (1), A515–70 (1) A516–70 (1) (2) A350–LF2 (1), A537–C1.1 (3)	
°F	Pressures are in pounds per square inch, gauge (psig)						
–20 to 100	285	740	990	1480	2220	3705	6170
200	260	675	900	1350	2025	3375	5625
300	230	655	875	1315	1970	3280	5470
400	200	635	845	1270	1900	3170	5280
500	170	600	800	1200	1795	2995	4990
600	140	550	730	1095	1640	2735	4560
650	125	535	715	1075	1610	2685	4475
700	110	535	710	1065	1600	2665	4440
750	95	505	670	1010	1510	2520	4200
800	80	410	550	825	1235	2060	3430
850	65	270	355	535	805	1340	2230
900	50	170	230	345	515	860	1430
950	35	105	140	205	310	515	860
1000	20	50	70	105	155	260	430
Material Group 2.1			(Type 304)			A182–F304 (5), A182–F304H A240–304 (5), A351–CF8 (5) A351–CF3 (4)	
–20 to 100	275	720	960	1440	2160	3600	6000
200	230	600	800	1200	1800	3000	5000
300	205	540	720	1080	1620	2700	4500
400	190	495	660	995	1490	2485	4140
500	170	465	620	930	1395	2330	3880
600	140	435	580	875	1310	2185	3640
650	125	430	575	860	1290	2150	3580
700	110	425	565	850	1275	2125	3540
750	95	415	555	830	1245	2075	3460
800	80	405	540	805	1210	2015	3360
850	65	395	530	790	1190	1980	3300
900	50	390	520	780	1165	1945	3240
950	35	380	510	765	1145	1910	3180
1000	20	320	430	640	965	1605	2675
1050		310	410	615	925	1545	2570
1100		255	345	515	770	1285	2145
1150		200	265	400	595	995	1655
1200		155	205	310	465	770	1285
1250		115	150	225	340	565	945
1300		85	115	170	255	430	715
1350		60	80	125	185	310	515
1400		50	65	90	145	240	400
1450		35	45	70	105	170	285
1500		25	35	55	80	135	230

Notes:
(1) Upon prolonged exposure to temperatures above about 800°F (425°C), the carbide phase of carbon steel may be converted to graphite: permissible but not recommended for prolonged use above 800°F
(2) Not to be used over 850°F
(3) Not to be used over 700°F
(4) Not to be used over 800°F
(5) At temperatures over 1000°F (540°C), use only when the carbon content is 0.04 percent or higher
(6) For temperatures above 1000°F (540°C), use only if the material is heat treated by heating it to a temperature of at least 1900°F (1040°C) and quenching in water or rapidly cooling by other means

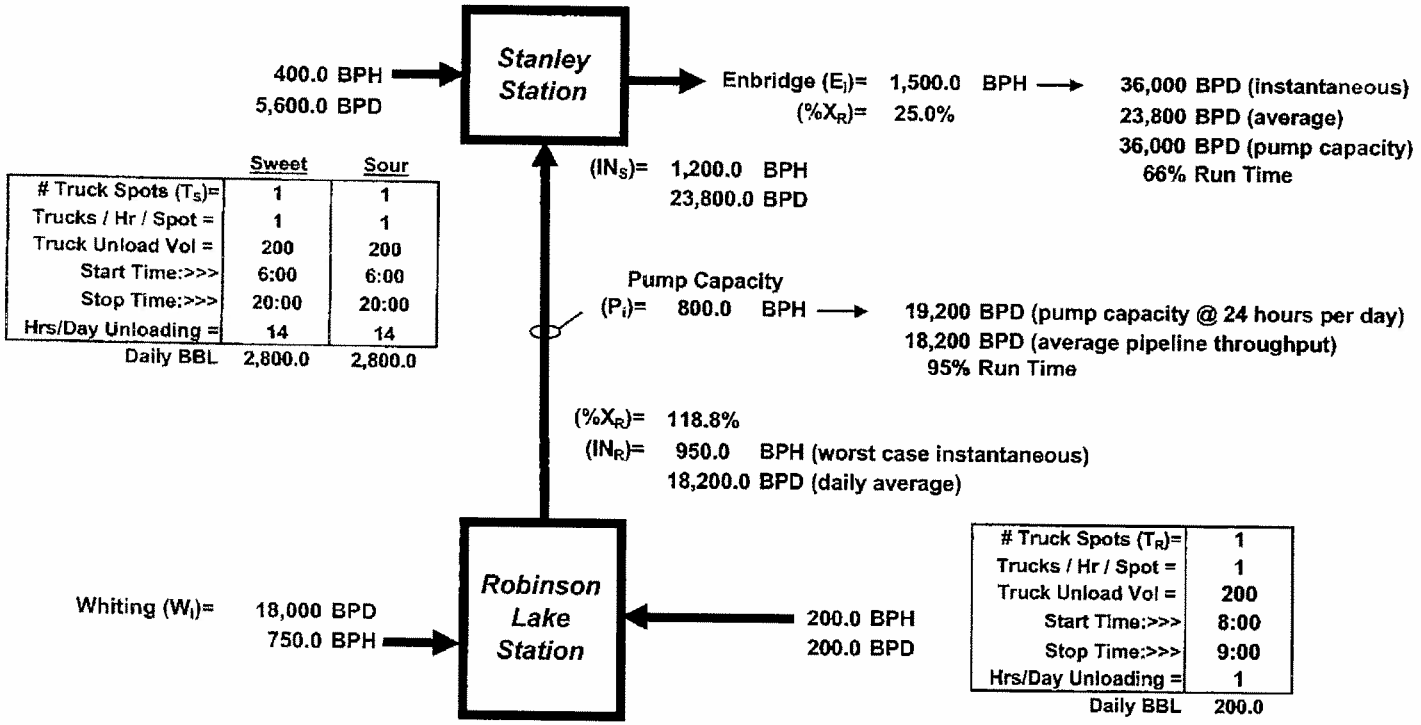
6.3. HAZOP Recommendations: Whiting Oil & Gas

During discussion of node 1 (Robinson Lake inlet from the Whiting Oil and Gas Co. crude pipeline), a representative from Whiting was available to provide information to the PHA team related to the pipeline and nearby operations.

As a result of the review of this node, six (6) recommendations were made for which input or follow-up from Whiting would be required. Two (2) of these six recommendations were ranked as "H" high risk. These recommendations were as follows:

Recommendations	Max RR	Responsibility
32. Review means to divert overland water from the Whiting facility away from the diked area at the Nexen Robinson Lake facility, as this water could reduce the capacity of the Nexen dikes. (Causes: 1.15.2)		Travis Mecham and Bill Hermann
35. Review the location of the truck unloading facility, as Whiting trucks will require access--via the truck unloading area--to other areas of the Robinson Lake site. (Causes: 1.15.4)		Bill Herrmann, Barry Garvin, Travis Mecham
1. Consider having Whiting add a bladder valve upstream of AOV-1001 (line 8-CO-ACA-1010), in order to protect and maintain backpressure in the Whiting oil pipeline. (Causes: 1.1.1, 1.1.2)	M	Bill Herrmann and Barry Garvin
3. Consider the addition of a low pressure alarm to PIT-1001, on the Whiting pipeline, as a potential means to identify leaks on the Whiting pipeline and at the inlet to the Robinson Lake station. (Causes: 1.1.1, 1.1.2)	M	Bill Herrmann and Barry Garvin
4. Verify with Whiting that their pipeline pumps will shut down on high discharge pressure, and/or verify that PSVs are included on the Whiting pipeline, to reduce the likelihood of potential pipeline ruptures that could occur should AOV-1001 at Robinson Lake malfunction closed. Also determine if the response time of the shutdowns on the Whiting pipeline are quick enough to reduce the likelihood of a spill in the event AOV-1001 malfunctions closed. (Causes: 1.1.3)	M	Bill Herrmann and Barry Garvin
33. Consider removing the drain line from the Whiting plant (the contents of which are currently unknown). (Causes: 1.15.3)		Travis Mecham and Bill Hermann

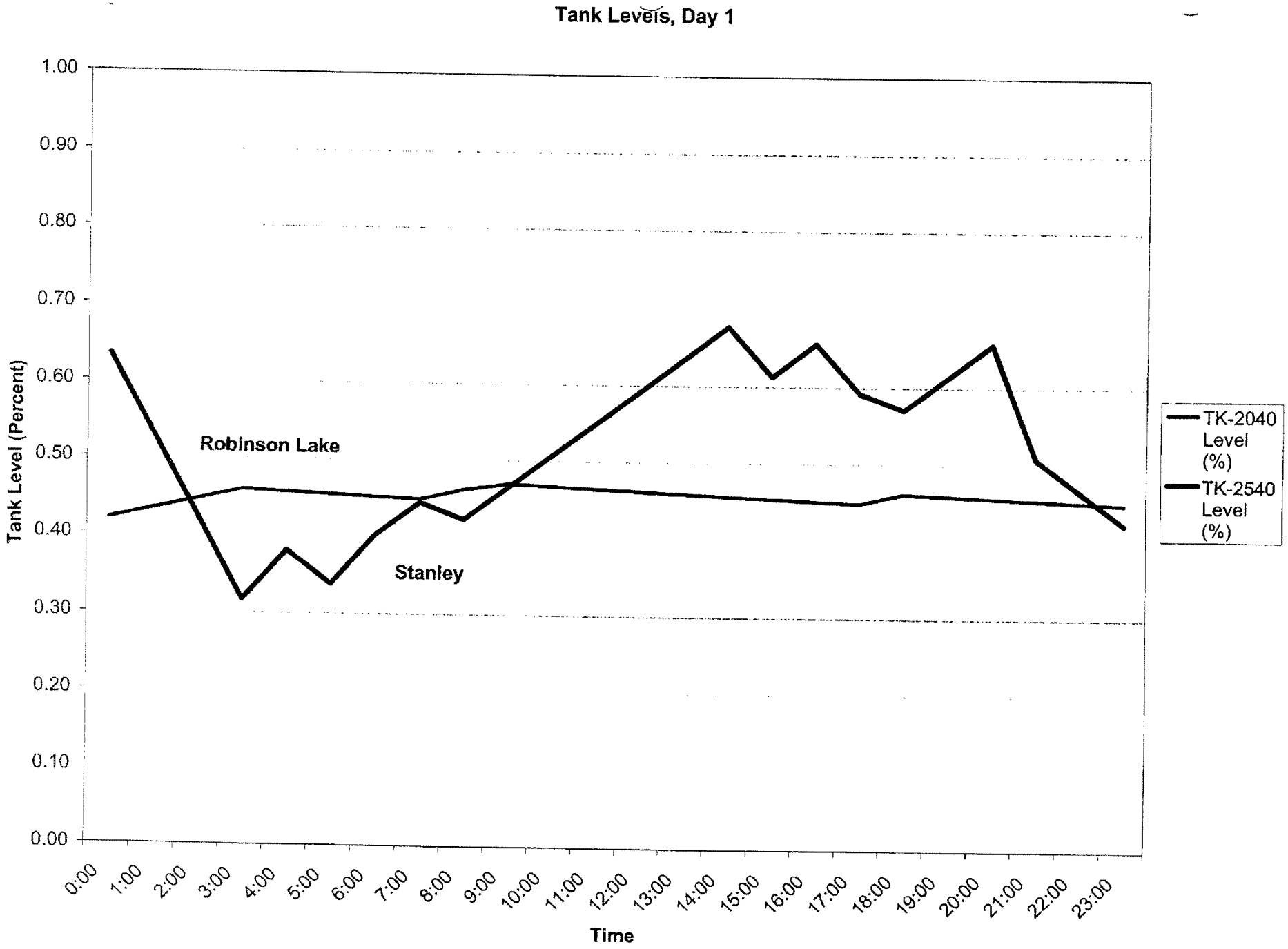
Stanley Outlet Pump Scenarios		Daily	Pump Operations
P-262 =	500 bph	12 M	1 bp INTERIM (P-262)
P-263 =	1000 bph	24 M	1 bp INTERIM (P-263)
P-262/263 =	1500 bph	36 M	2 bp INTERIM (P-262 & P-263 in parallel)
			Future
			Future

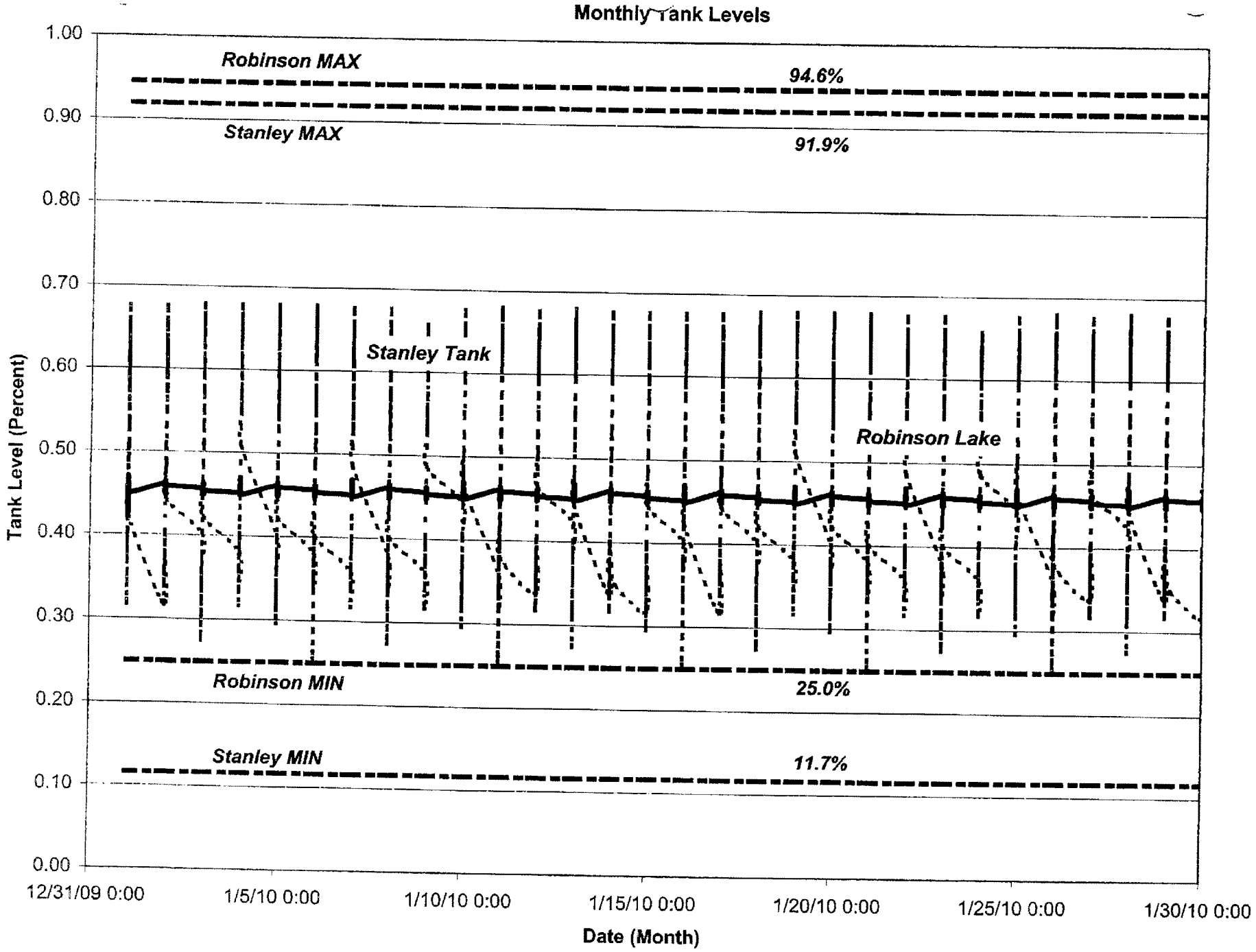


	Sweet	Sour
# Truck Spots (T_S)=	1	1
Trucks / Hr / Spot =	1	1
Truck Unload Vol =	200	200
Start Time:>>>	6:00	6:00
Stop Time:>>>	20:00	20:00
Hrs/Day Unloading =	14	14
Daily BBL	2,800.0	2,800.0

# Truck Spots (T_R)=	1
Trucks / Hr / Spot =	1
Truck Unload Vol =	200
Start Time:>>>	8:00
Stop Time:>>>	9:00
Hrs/Day Unloading =	1
Daily BBL	200.0

R-L Outlet Pump Scenarios		Daily	Pump Operations
P-201 or 202 =	417 bph	10 M	1 bp INTERIM (P-201)
P-201 and 202 =	500 bph	12 M	2 bp INTERIM (P-201 & P-202)
P-201 and 202 w/ P-264=	800 bph	19.4 M	2 bp INTERIM (plus P-264 from Stanley)
			Future


Tank Levels, Day 1
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Tank Level (Percent)
Robinson Lake
Stanley
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Time
TK-2040 Level (%)
TK-2540 Level (%)


Monthly Tank Levels
Robinson MAX
94.6%
Stanley MAX
91.9%
Stanley Tank
Robinson Lake
Robinson MIN
25.0%
Stanley MIN
11.7%
Tank Level (Percent)
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
12/31/09 0:00
1/5/10 0:00
1/10/10 0:00
1/15/10 0:00
1/20/10 0:00
1/25/10 0:00
1/30/10 0:00
Date (Month)